MEMO

ARCADIS Design & Consultancy for natural and built assets

SUBJECT
Response to Comments on Addendum 1 to the Arimetco Heap Leach Fluid Management Systems Operation and Maintenance Plan

DATE
July 25, 2017

LOCATION
Yerington Mine Site
1 Austin Circle
Yerington, NV 89447

FROM
Travis Phelps

TO
Jack Oman

WORK RELEASE NUMBER
WR309438

OUR REF PROJECT NUMBER
BPOE3901.9438

COPIES TO
Dante Rodriguez
John Batchelder
Patrick Keller

Overview

This memo is intended to provide responses to comments from the United States Environmental Protection Agency (USEPA) and other entities on Addendum 1 to the Arimetco Heap Leach Fluid Management Systems Operation and Maintenance Plan for the Yerington Mine Site in Yerington, Nevada (the site). ARC responses to USEPA comments are provided first, followed by responses to peer review comments.

Responses to USEPA Comments

Response 1:

Closing the catch basin at the end of 2017 will exclude it from future use. Not being able to re-use the basin was considered; however, ARC did not want to create a "pond" at the top of the VLT HLP that would collect precipitation over the winter and spring seasons and potentially attract migratory birds. The piping and sprayer systems will still function, but a new basin would need to be constructed should the Enhanced Evaporation System (EVS) be implemented in the 2018 or future seasons.

Response 2:

Please see Arcadis' Enhanced Evaporation Particulate Air Monitoring Memo (Attached).

Response 3:

The wind speed and direction will be monitored with a stand-alone met station located near the evaporation basin. The AcuRite 01036 Pro Weather Station is capable of transmitting real-time data to a cell phone where it can be monitored. The system will not be shut down for a single gust of wind over 20 mph; however, consistent gusts or constant wind speed over 20 mph will trigger a shutdown. The catch basin was designed to capture all water droplets under typical wind speed and directions as an improvement to the SPS system for improving evaporation and managing solids. However, it is also understood that unexpected wind gusts and changes in direction can cause some water droplets to fall outside of the catch basin and onto the VLT HLP. As the VLT HLP extends a minimum of approximately 400 feet outside the edge of the basin, there is no concern of water droplets leaving the VLT HLP area.

Responses to Peer Review Comments

Response 4:

Discrepancy in evaporation efficiency noted. The system was designed to make the efficiency of the evaporator nozzles irrelevant. The assumption was made that, should the nozzles have 0% efficiency, the

water depth in the catch basin could evaporate within a day, making 100% evaporation efficiency. 192 gpm pumped for 3 hours a day = 34,560 gallons = 4,620 cubic feet. The catch basin is 150,000 square feet; therefore, the daily volume of water would amount to 0.0308 ft or 0.37 inch of water. Daily uncorrected evaporation pan evaporation rates for August 2016 were 0.52 inch and 0.38 inch for September 2016.

Response 5:

The two curves represent the spray leaving from opposite sides of the nozzle.

Response 6:

Per Response #4, by adding the evaporation basin, efficiency is 100%; therefore, there is no correction needed.